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# ANNUAL REPORT

## 2015



## **NOAA Vision**

*Science, Service, Stewardship: Healthy ecosystems, communities, and economies that are resilient in the face of change*

## **NOAA Mission**

*Science, Service, and Stewardship: To understand and predict changes in climate, weather, oceans, and coasts, to share that knowledge and information with others, and to conserve and manage coastal and marine ecosystems and resources.*

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## **Top Priorities 2014-2016**

*Make Communities more Resilient*

*Evolve the Weather Service*

*Invest in Observational Infrastructure*

*Achieve Organizational Excellence*



## Regional Collaboration Vision

*A unified and regionally integrated NOAA*

## Regional Collaboration Mission

*To identify, communicate and respond to regional needs, catalyze collaboration; and connect people and capabilities to advance NOAA's mission and priorities*

**GOAL:** *Address regional challenges by connecting people and resources*

**GOAL:** *Exchange both national and regional insights that inform action*

**GOAL:** *Improve the understanding of and respect for NOAA's broad mission and regional capabilities*

## Core Values

**Regional knowledge and context** matter

**Partnerships and shared responsibility** are foundational

Relationships are based on **mutual trust** and **respect**

**Collaboration** is essential to successful **leadership**

**Innovation and creativity** are integral to executing NOAA's mission



# NOAA West Team Members

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NOAA West Team Lead

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Regional Climate Services Director  
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Climate Services Program  
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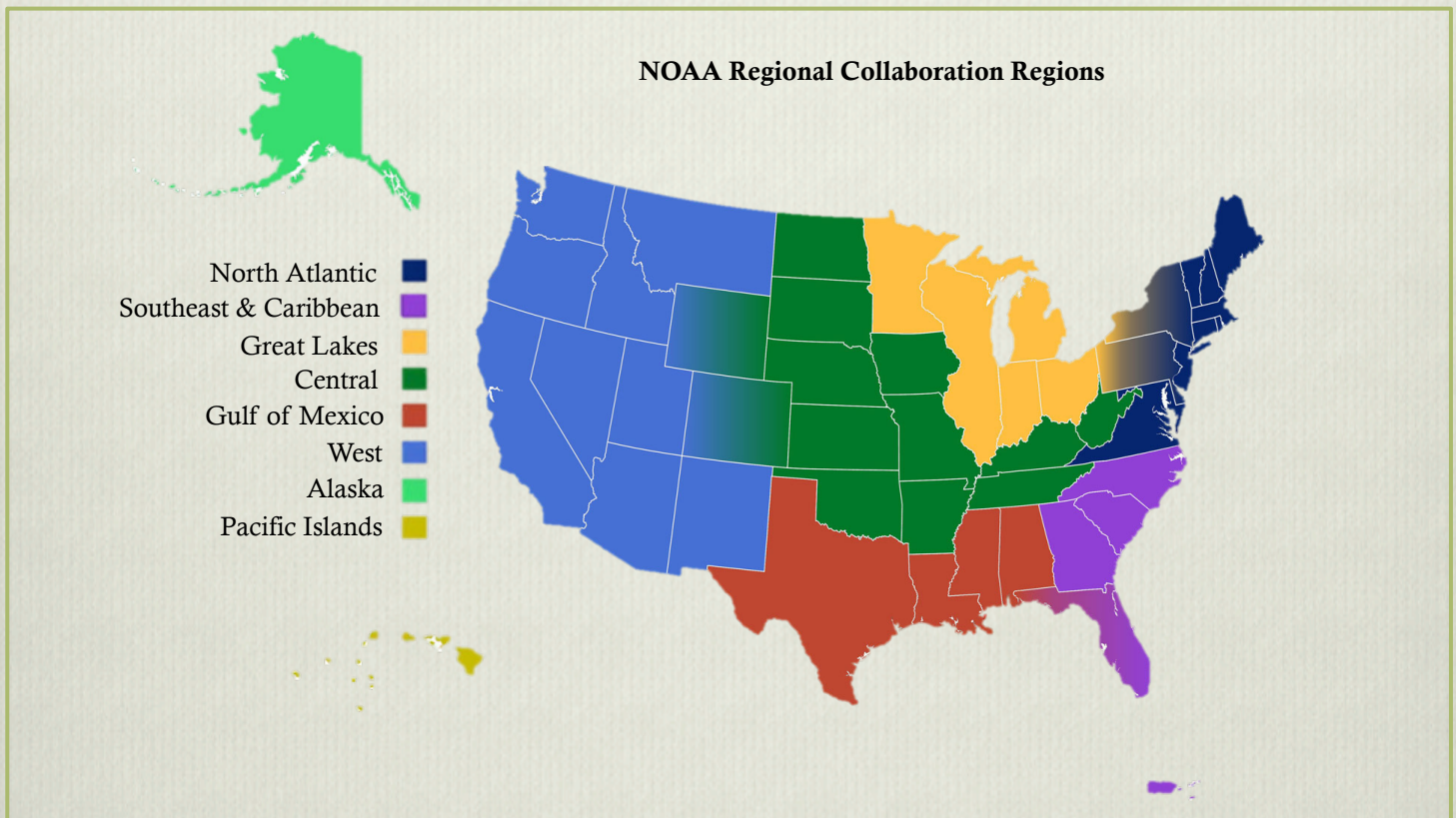
David Lott  
West Coast Operations  
Office of National Marine Sanctuaries

Susan McLean  
National Centers for Environmental Information



## Regional Collaboration Background

NOAA's Regional Collaboration effort is a network of NOAA employees and partners representing the agency's diverse capabilities across the country. Eight geographic regions are represented by Regional Collaboration Teams, comprised of members representing line office mission interests and capabilities. The teams are led by senior level Regional Team Leads and full-time Regional Coordinators. At the national level, the effort is supported and overseen by the NOAA Executive Panel, and an Advisory Group consisting of headquarters-level Line Office leadership.



NOAA has many partners with many needs, and demands for NOAA services are growing. The effective implementation of NOAA's mission requires consideration of variability in the natural environment and also regionally specific attributes of the citizenry, and the places in which they live.

Many of the complex challenges that drive NOAA mission are place based, and require interdisciplinary approaches and regionally tailored solutions. The Regional Collaboration network addresses regional challenges by engaging and connecting people and resources within the regions and with headquarters, in ways that are rich in regional insight and that inform action. Through this work, NOAA's Regional Collaboration effort improves the understanding of, and respect for NOAA's broad mission and regional capabilities. Our vision of a unified and regional integrated NOAA is focused on service to the nation by meeting the evolving demands of regional stakeholders.



## NOAA Western Regional Collaboration Team (NOAA West)

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NOAA West team members reflect the diversity of NOAA's presence in the region, and is comprised of subject matter experts from all five NOAA business lines, and two partner organizations - Sea Grant, and the Western Regional Climate Center. Team members are located in offices across the region.

Within the broader regional collaboration framework and strategy, NOAA West focuses its efforts on “unifying issues” – that is, well-documented regional priorities that are best addressed by a coordinated cross-NOAA response, and on issues that the NOAA West team can add unique value.

The team also focuses considerable effort on developing strategic partnerships that result

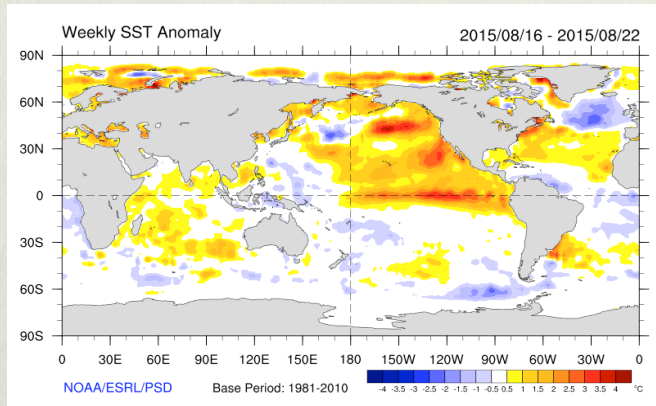
in improved understanding of NOAA mission and regional capabilities, and that improve the visibility and value of NOAA to policy makers and the public. This report highlights the work and accomplishments of the NOAA Western Region Collaboration Team (NOAA West) for Fiscal Year 2015.

There are many examples of effective collaboration in the region that are not led by NOAA West, but that are supported through the leadership and participation of NOAA West team members. Over the last year, NOAA West team members were involved in high visibility and high impact collaborations including the California Drought Service Assessment; the regional implementation of National Ocean Policy, including the establishment of the Regional Planning Body, West Coast Data Portal, and evolution of the West Coast Ocean Partnership; work to support the National Integrated Drought Information System Drought Early Warning Systems; and ongoing efforts to implement the Russian River Habitat Blueprint in California, and habitat conservation collaborations in the Pacific Northwest. Although this report does not describe these collaborations, it is worthy to note the engagement and collaborative spirit of NOAA West team members as they work to expertly implement NOAA's mission in the region.



# NOAA West Fiscal Year 2015 Formulation

As part of the formulation process, the team identified a number of high visibility, high impact regional issues, including drought, flooding and water resources; wildfires; changing ocean chemistry, protected species conservation and recovery, and the Pacific Anomaly and emerging El Niño.



The Pacific Anomaly, or “Warm Blob”, and emergent El Niño. NOAA/ESRL/PSD



California is in the fourth year of drought  
Robyn Beck/AFP/Getty Images

During deliberation, the team realized that the common thread across these issues is changing climate conditions. Every NOAA mission line is involved in “climate” work, but at different points along the research to management applications continuum.



Impacts from changing ocean chemistry remains a priority regional issue. NOAA/NMFS



Wildfires in Twisp, Wash., Aug. 20, 2015  
Erika Schultz/The Seattle Times via AP

Ultimately the discussion focused on how the team could work, in close coordination with the Regional Climate Services Director and in-region partner network, to advance climate services in the region to better address some of these chronic or emerging issues. Improving foundational knowledge of regional climate services surfaced as the top team priority for Fiscal Year 2015.



## ***Regional Collaboration Goal: Address regional challenges by connecting people and resources***

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### ***Regional Climate Services Landscape Survey***

NOAA West Investment: \$43,000.

Supplemental Funds: \$10,000 from NESDIS, NWS, NMFS, NOS & OAR

Background: The regional landscape of climate issues, interested parties, partners and stakeholders is complex, and growing more complex. Little information is available on the provision and use of regional climate services within the region, and there is no systematic understanding of gaps in information needs, or overlap in service delivery.

This year the team kicked off a project that aims to develop a relational database tool capable of generating a regional landscape report of climate services within the western region for the purposes of characterizing and understanding who is providing and utilizing climate services within the region at federal, state, tribal and local levels. Climate services are defined as scientifically based information and products that enhance users' knowledge and understanding about the impacts of climate on their decisions and actions (AMS policy statement).

The goal of the project is to inform NOAA and our partner network of the current landscape of climate service provision and use in the region across specific sectors. This information will help inform NOAA climate service engagement and help identify gaps and areas of overlap.



The climate services landscape project is implemented through the Cooperative Institute for Research in Environmental Sciences, the Western Water Assessment RISA, and the Climate Assessment for the Southwest RISA. The tool will operationally reside with the Western Regional Climate Center where it will be annually updated and broadly available.



## ***Regional Collaboration Goal: Address regional challenges by connecting people and resources***

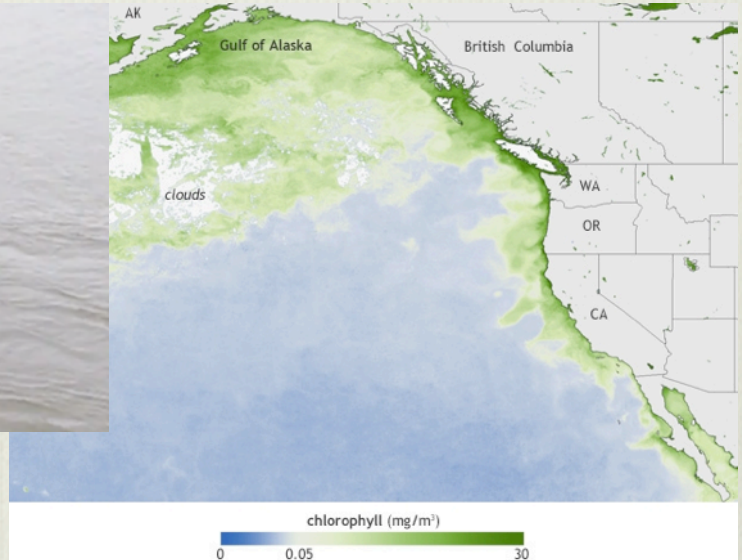
### ***West Coast Harmful Algal Bloom Response***

NOAA West Investment: \$500.

Background: One of the goals of establishing NOAA Regional Teams is to improve the agency's flexibility to respond to emerging or unanticipated regional issues. During the spring and summer of 2015, the entire West Coast experienced a Harmful Algal Bloom (HAB) event that was unprecedented in its extent and magnitude.



California sea lion seizing from domoic acid poisoning in May 2015. Credit: Dan Ayres/Washington Department of Fish and Wildlife



Average chlorophyll concentrations in July 2015. Darkest green have highest surface concentrations. NOAA Climate.gov map.

The domoic acid bloom extended from California northward to Vancouver Island. In the outer coast of Washington, sea lions were observed seizing from the ingest of toxic shellfish. In Washington, State officials banned razor clamming and closed Dungeness crab harvesting. Officials in California warned people not to eat mussels, clams, anchovies and sardines; and in Oregon, officials shut down shellfish harvesting from the Columbia River south to Tillamook Head and banned razor clamming across the state.



Research analyst, Anthony Odell, studying the toxic algae bloom in the Pacific Ocean aboard the Bell M. Shimada. (NOAA)

Scientists suspected a link to the anomalous warm water conditions in the Eastern Pacific, and a NOAA Fisheries science team sought to “piggy back” on a scheduled fisheries survey on the Bell M. Shimada in order to sample the West Coast wide HAB event. The fisheries scientists had no funding to mobilize and urgently requested the help of NOAA West. The team provided a modest amount of funding in a timely way in order to facilitate the rapid deployment of the science team.



# Regional Collaboration Goal: Exchange both national and regional insights that inform action

## Regional Environmental Conditions and Impacts Coordination

### NOAA West Investment: Staff time

Background: In recognition of growing regional impacts from changing climate conditions – from the Pacific Anomaly also known as “The Blob”, to the strengthening El Niño – the team developed a strategy and implementation plan to collect and document regional environmental conditions and impacts to human systems and NOAA mission. There is a significant amount of useful information on changing environmental conditions, but a gap in the compilation and synthesis of impacts at seasonal timescales.

2015 Environmental Conditions and Impacts					
Source (SME or News)					
	A	B	C	D	E
	Source (SME or News)	Date	Environmental Condition or Human Impact Description	Anomaly/Env. Condition	Sector/Human Impact
1	E&C Climate	6/24/2015	The National Oceanic and Atmospheric Administration reported sea levels that last month were the hottest in over a century. Global average temperatures were 61.88 degrees Fahrenheit, which is 0.14 degrees higher than the previous record set in July 1998. The El Niño that is building in the Pacific is being held responsible for the higher-than-normal ocean temperatures. The El Niño could bring some relief to the drought-stricken areas in the western United States by creating conditions for a wetter-than-normal winter, but the magnitude of the effects will be a matter of debate.	Record temperatures, ENSO	
27	E&C Green	6/25/2015	Two California water districts are asking a federal judge to halt releases of extra water in the Klamath Basin. The Klamath River Water District and the San Luis & Delta Mendocino Water Authority is seeking a preliminary injunction against the releases, which are meant to help salmon survive the drought. The water districts argue the Bureau of Reclamation has no authority to release extra water from the Klamath River for fish passage because they are not protected by the Endangered Species Act. The Bureau of Reclamation started diverting water Friday from the Klamath Dam in order to avoid what some feared could be a massive fish kill, like one in 2002 that left tens of thousands of salmon dead.	Drought, water diversions	Water district lawsuit, fisheries
28	E&C Climate	6/22/2015	Wildfires in Washington have grown so severe that the state called on its citizens to join local and foreign firefighters and military personnel in the fight against the flames and was immediately swamped by aid. — Fire department — volunteers. Almost 7.5 million acres have burned in the country so far, according to the National Interagency Fire Center in Boise, Idaho, more than any other consecutive season in the state's history. As of today, around 72 large fires are burning on 1.8 million acres across the country, mostly in the Northern Rockies and the Pacific Northwest. “There are 750,000 acres burning just in Washington,” said Joe Smith, a spokesman for the Washington State Department of Natural Resources. The interagency fire center said the number of 800,000 acres yesterday morning, with several new fires. “This is the 100-year flood,” Smith added.	Wildfire	Firefighting Resources, Forestry
29	E&C Green	6/25/2015	Washington Sen. Maria Cantwell (D) announced today she plans to unveil a version of a bipartisan comprehensive wildfire bill during a committee field hearing Thursday on wildfire fires that have scorched her home state this summer. Cantwell, the ranking member of the Senate Energy and Natural Resources Committee, will be joined at the hearing by Sen. Jim Inhofe (R-OK), who chairs the Subcommittee on Public Lands, Forestry and Mining. The goal of all 11 senators is to prevent “fire borrowing,” which occurs when the Forest Service runs out of funding to fight wildfires and must transfer money from non-fire accounts. Borrowing has occurred with increasing frequency over the past decade and changed the agency's ability to keep forests healthy and accessible to the public.	Wildfire	Policy, National budget “fire borrowing”
30	E&C Green	6/26/2015	Water continues to grow increasingly scarce in the Navajo Nation, as the Southwest region suffers through a crippling drought. According to USGS, snow levels have fallen by more than two-thirds on average in northern Arizona since the 1950s. Local temperatures are generally 2 degrees Celsius higher than in the 1950s as snow becomes rain and evaporation dries out many streams and drains the Colorado River and others, crucial water supplies in the Southwest. With low household incomes and high unemployment rates, the Navajo Nation is being stretched thin by water shortages. Also in Gallup, NM, said the spring where she and husband James McCale, 75, used to collect water has dried up and the family gave up spring corn, a staple of Navajo life and ceremonies. The McCales and others travel long distances to buy water and food. Other wells are contaminated, a legacy of unregulated uranium mining on the reservation, or too salty for human consumption. According to tribal officials, more than 50,000 Navajo have water from unregulated, potentially contaminated sources. With the potential for farming or livestock dying up, young Navajos are leaving the reservation. While the overall tribe population grew slightly between 2000 and 2010, the number at the reservation shrank by nearly 4 percent, according to the U.S. Census.	Drought, warm temperatures, low snow levels	Native American, contaminated water, economic and cultural
31	E&C Climate	6/26/2015	Thick, low smoke from the fires in the Pacific Northwest drifted inland to overwhelm Calgary, Alberta, Canada, earlier this week. Yesterday, the Canadian government issued a warning for air quality in Calgary to the highest risk possible. Similar total advisories of varying severity have been issued for Portland, Ore. and Los Angeles. In northern Washington, one quarter of the fires, but the effects of the fires are not just a problem for that area. Regions of Oregon, Idaho, Montana and California are also with significant fires. According to the National Interagency Fire Center, 66 large fires or complexes are burning on nearly 1.8 million acres. Canada saw 16 new fires in the last 24 hours, according to the Canadian Interagency Forest Fire Center. Though fire hazard in the country is low to moderate right now, both countries have seen around 7.5 million acres burned so far this season, which is higher than the 10-year average. The smoke from the blazes hangs over the growing wheat, corn and soybean crops, as well as the cattle that graze on the pasture and respiratory systems of women heart and lung conditions, even for away from the source of the fire, according to the Centers for Disease Control and Prevention. Authorities in places hit by thick smoke are recommending that residents, especially the elderly, children, or people with heart and lung conditions, reduce their outdoor activities as a precaution.	Air quality limited, particulate matter and gases, health advisories	
32	E&C Green	6/27/2015	More than 21,000 people are unable to work because of California's drought, most of them in the agriculture sector, according to new research. The study from the University of California, Davis, found that farmworkers lucky enough to be working during the drought are often making do with lower pay. The drought is exacerbating poor living conditions for many workers on the margins, said Michael McFarland, executive director of Shodor, an	Drought	Agriculture, labor market, poverty/living conditions

### Regional Impacts Summary

Anomalies noted in the Google spreadsheet:

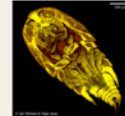
1. Warm temperature
2. Warm water temperature
3. Drought
4. Low snowmelt & water supply
5. Record rainfall
6. El Niño
7. Flood risk
8. Extreme heat
9. Toxic algae
10. Marine species distribution
11. Fish mortality
12. Fish disease

Impacts noted in the Google spreadsheet:

1. Marine ecosystem; fisheries
2. Loss of life
3. Loss of property
4. Increased flood risk
5. Marine ecosystem
6. Fisheries closures
7. Emergency declarations
8. Native communities
9. Agricultural losses & labor market
10. Water reductions
11. Federal budget “fire borrowing”
12. Federal policy

### Unusual sightings on the OR coast - this El Niño

#### Unusual copepods



#### Pelagic molluscs



#### Pelagic tunicates



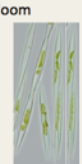
#### Jellyfish



#### Skinny salmon in ocean



#### Pseudo-nitzschia bloom



Through this work, the team intends to:

1. Document and share information on environmental observations and reported human system and NOAA mission impacts
2. Improve coordination, communication and internal awareness of environmental conditions and human system impacts across NOAA mission lines and our extensive partner network; and
3. Improve external communication of changing conditions and impacts, including but not limited to El Niño, and tailor communications to elected officials.

The effort will conclude in Spring 2016, with a retrospective conditions report and human systems and NOAA mission impacts summary. The effort will be evaluated for its utility in coordinating and summarizing information during future climate related events.



## ***Regional Collaboration Goal: Improve the understanding of and respect for NOAA's mission and regional capabilities***

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### ***Leadership Engagement***

NOAA West Investment: Staff time

Background: The team is often called on to develop in-region engagement for NOAA leadership that highlights regional issues and needs, and articulates compelling stories of NOAA's regional cross mission capacity and partnerships. Working with the Program Coordination Office, the team scopes, plans and executes engagements that highlight leadership priorities as exemplified in the region.

This work provides valuable insights to leadership that help them convey messages on how NOAA delivers service to the nation.

Team members are also often called to help develop leadership opinion pieces for regional media outlets, utilizing their knowledge of regional issues and politics, as well as their extensive in-region partnership networks.



NWS, NOS, NMFS and OMAO representatives at the Port of Seattle as part of an engagement of the Maritime Sector.



Dr. Sullivan viewing native oyster hatchery operations  
NOAA Manchester Research Station



Timi Vann, NOAA West Regional Coordinator interviews  
VADM Devany as part of an interactive NOAA All Hands

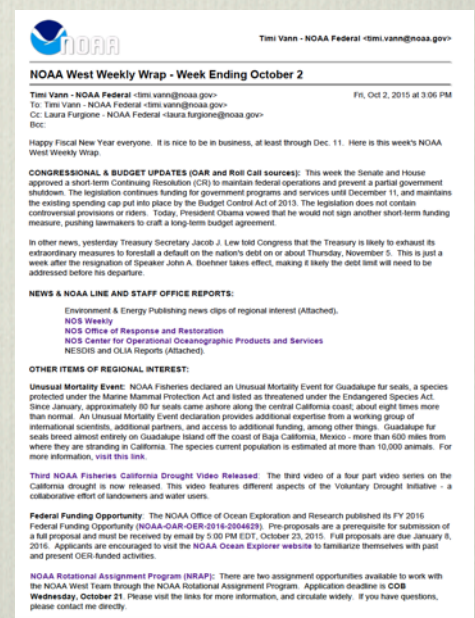
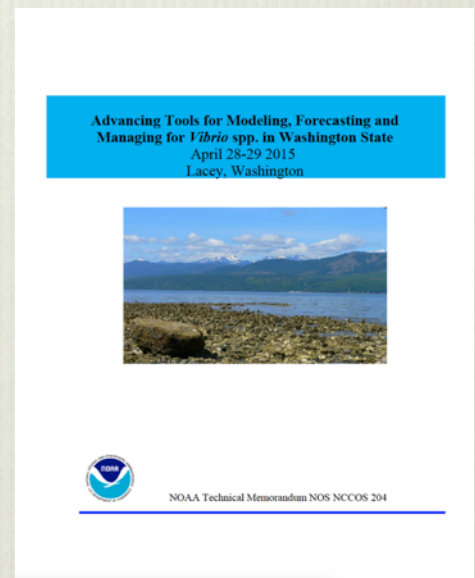
In Fiscal Year 2015, NOAA West provided this service to the NOAA Administrator, the Deputy Under Secretary for Operations, and the Chief of Staff, Office of Communications on an average of one engagement per quarter.



# NOAA West Regional Team Administration

The NOAA West Regional Coordinator, sponsored by the National Weather Service, is the only full-time employee dedicated to NOAA West activities. The Regional Coordinator is responsible for coordinating collaborative team activities, and providing expert administration of team business, including team meetings, budget oversight, and reporting requirements. In addition, the NOAA West Regional Coordinator provides policy analysis and communication to a broad segment of NOAA in the region, and tailored corporate customer service to support NOAA mission at Headquarters and in the region. Highlights for 2015 include:

- Led the collaborative development of the Regional Collaboration Network Strategy Map 2015-2020, and delivered the Regional Collaboration Network overview presentation to the NOAA Executive Panel.
- Formulated the approach for the *Advancing Tools for Modeling, Forecasting and Managing for Vibrio spp. in Washington State* workshop, and facilitated the exchange of technical information on data, models, and decision support tools. Results from this work are published in NOAA Technical Memorandum NOS NCCOS 204.
- Provided NOAA field leadership for the Department of State, Foreign Press Centers, Press Tour on “Environmental Protection of Oceans and Fishing”. Implemented cross-NOAA subject matter expert briefings for 14 foreign press. According to the U.S. Department of State, *“the resulting stories allowed us to get important messages to, literally, millions of people.”*
- Issued 44 “NOAA West Weekly Wraps”, an aggregation and synthesis of regionally relevant information, to regional stakeholders.
- Led the development of the 2015 NOAA West Regional Landscape document – a descriptive analysis of the region, high visibility issues, regional partnerships, and NOAA mission drivers.





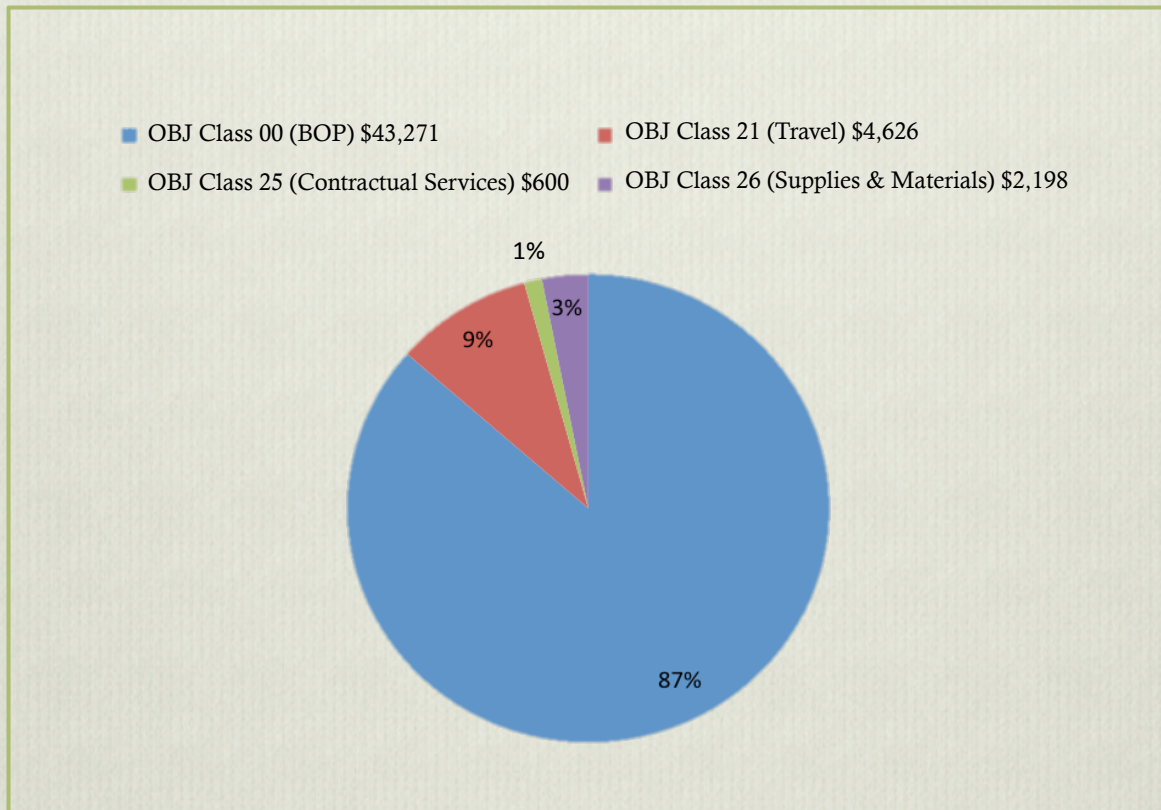
# NOAA West Fiscal Year 2015 Expenditure Report

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Background: Each regional team is resourced through funding that is pooled across five of six line offices. These offices contribute \$80,000 apiece to the effort, and that \$400,000 is divided between the eight teams, with each team receiving an annual \$50,000 allocation. A full-time regional coordinator, funded by a line office sponsor, administers the teams. The NOAA West Regional Coordinator is sponsored by the National Weather Service.

The NOAA West \$50,000 allocation for Fiscal Year 2015 is detailed in Table 1.

**Table 1. FY15 Expenditure Report**



As the chart indicates, the majority of team funds (87%) were invested in the Regional Climate Services Landscape project. Smaller expenses were reported for travel (9%), supplies and materials (3%) and contractual services (1%).



